

WHAT IS CLAIMED IS:

1. In a vial autosampler, a gripper mechanism comprising:

an actuator;

a plurality of jaws coupled to the actuator;

and

wherein the actuator urges a first jaw of the plurality of jaws and a second jaw of the plurality of jaws in a first direction upon energization, and wherein at least one of the jaws includes a magnet disposed therein, which magnet urges the plurality of jaws in a second direction opposite the urging of the actuator.

2. The gripper mechanism of claim 1 wherein both first and second jaws include at least one magnet disposed within each jaw.

3. The gripper mechanism of claim 2 wherein the actuator urges the first and second jaws in the first direction to close upon energization.

4. The gripper mechanism of claim 2 wherein the actuator urges the first and second jaws in the first direction to open upon energization.

5. The gripper mechanism of claim 1 wherein the plurality of jaws are formed of a non-magnetic material.

6. The gripper mechanism of claim 1 wherein the actuator is an air cylinder.

7. The gripper mechanism of claim 1 wherein the actuator is an electric solenoid.

8. The gripper mechanism of claim 1 wherein the actuator is a rotary motor.

9. The gripper mechanism of claim 8 wherein the rotary motor is a DC motor.

10. The gripper mechanism of claim 8, and further comprising at least one drive rod coupling the motor to at least one jaw.

11. The gripper mechanism of claim 8, and further comprising a pair of drive rods coupling the motor to the plurality of jaws.

12. The gripper mechanism of claim 1 wherein the plurality of jaws are exchangeable.

13. The gripper mechanism of claim 1 wherein the at least one magnet is a rare-earth magnet.

14. The gripper mechanism of claim 1 wherein each jaw includes a lower portion having a friction portion that contacts a vial.

15. The gripper mechanism of claim 14 wherein the friction portion of at least one jaw is formed of a compressible material.

16. The gripper mechanism of claim 15 wherein the compressible material is an urethane.

17. The gripper mechanism of claim 14 wherein the friction portion of at least one jaw is formed of an incompressible material.

18. The gripper mechanism of claim 17 wherein the incompressible material is diamond friction tape.

19. An autosampler comprising:
a vial storage area adapted to store a number of vials for sampling;
a vial analysis station adapted to extract a sample from a given vial;
a vial gripper mechanism adapted to select and transport the given vial from the storage area to the vial analysis station, wherein the gripper mechanism includes:

an actuator;
a gripper member coupled to the
actuator wherein the gripper
member includes a first jaw and a
second jaw;
wherein the actuator urges the first
jaw and the second jaw in a first
direction upon energization; and
wherein at least one of the jaws
includes a magnet disposed
therein, which magnet urges the
jaws in a second direction
opposite the urging of the
actuator.

20. The autosampler of claim 19, wherein upon
energization, the actuator urges the jaws of the
gripper member toward each other.